

SEQUENCE LISTING

<110> Genencor International, Inc.

<120> Methods for Production of Proteins in
Host Cells

<130> GC559-PCT

<140> PCT/US00/34055

<141> 2000-12-14

<150> US 09/470,830

<151> 1999-12-23

<160> 44

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<210> 1

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<212> DNA

<213> Escherichia coli

<400> 1

gaagttgaaa ccaaactctgc tgggtggtatc gttctgaccg gttctgctgc tgcg

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<213> Escherichia coli

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Glu Val Glu Thr Lys Ser Ala Gly Gly Ile Val Leu Thr Gly Ser Ala

1 5 10 15

Ala Ala

<210> 3

<211> 19

<212> PRT

<213> Escherichia coli

<400> 3

Glu Val Glu Thr Lys Ser Ala Gly Gly Ile Val Leu Thr Gly Ser Ala

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Ala Ala Lys

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<213> Acyrthosiphon pisum

<400> 4

Glu Val Glu Ser Lys Ser Ala Gly Gly Ile Val Leu Thr Gly Ser Ala

1 5 10 15

Ala Gly Lys

<210> 5

<211> 19
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<213> *Haemophilus ducreyi*

<400> 5
Glu Val Glu Thr Cys Ser Ala Gly Gly Ile Val Leu Thr Gly Ser Ala
1 5 10 15
Thr Val Lys

<210> 6
<211> 19
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<213> *Pseudomonas aeruginosa*

<400> 6
Glu Glu Glu Thr Lys Thr Ala Gly Gly Ile Val Leu Pro Gly Ser Ala
1 5 10 15
Ala Glu Lys

<210> 7
<211> 19
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<213> *Allochromatium vinosum*

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Glu Glu Glu Arg Leu Ser Ala Gly Gly Ile Val Ile Pro Asp Ser Ala
1 5 10 15
Thr Glu Lys

<210> 8
<211> 19
<212> PRT
<213> *Coxiella burnetii*

<400> 8
Glu Glu Glu Arg Thr Ser Ala Gly Gly Ile Val Ile Pro Asp Ser Ala
1 5 10 15
Ala Glu Lys

<210> 9
<211> 19
<212> PRT
<213> *Legionella micdadei*

<400> 9
Glu Glu Glu Arg Thr Thr Ala Gly Gly Ile Val Ile Pro Asp Ser Ala
1 5 10 15
Thr Glu Lys

<210> 10
<211> 19
<212> PRT
<213> *Sinorhizobium meliloti*

<400> 10
Glu Ser Glu Glu Lys Thr Lys Gly Gly Ile Ile Ile Pro Asp Thr Ala
1 5 10 15

Lys Glu Lys

<210> 11

<211> 19

<212> PRT

<213> Legionella pneumophila

<400> 11

Glu Glu Glu Arg Thr Thr Ala Gly Gly Ile Val Ile Pro Asp Ser Ala
1 5 10 15

Thr Glu Lys

<210> 12

<211> 19

<212> PRT

<213> Brucella abortus

<400> 12

Glu Ser Glu Ala Lys Thr Ala Gly Gly Ile Ile Ile Pro Asp Thr Ala
1 5 10 15

Lys Glu Lys

<210> 13

<211> 19

<212> PRT

<213> Bradyrhizobium japonicum

<400> 13

Asp Ala Glu Glu Lys Thr Ala Gly Gly Ile Ile Ile Pro Asp Thr Val
1 5 10 15

Lys Glu Lys

<210> 14

<211> 19

<212> PRT

<213> Agrobacterium tumefaciens

<400> 14

Glu Ser Glu Ala Lys Thr Lys Gly Gly Ile Ile Ile Pro Asp Thr Ala
1 5 10 15

Lys Glu Lys

<210> 15

<211> 19

<212> PRT

<213> Clostridium acetobutylicum

<400> 15

Glu Ala Glu Glu Thr Thr Lys Ser Gly Ile Val Leu Pro Ser Ser Ala
1 5 10 15

Lys Glu Lys

<210> 16

<211> 19

<212> PRT

<213> Amoeba proteus

<400> 16
 Glu Glu Glu Arg Thr Thr Ala Gly Trp Ile Val Ile Pro Asp Ser Ala
 1 5 10 15
 Thr Glu Lys

<210> 17
 <211> 19
 <212> PRT
 <213> *Sinorhizobium meliloti*

<400> 17
 Glu Ser Glu Glu Lys Thr Lys Gly Gly Ile Ile Ile Pro Asp Thr Ala
 1 5 10 15
 Lys Glu Lys

<210> 18
 <211> 19
 <212> PRT
 <213> *Lactococcus lactic*

<400> 18
 Glu Glu Glu Glu Lys Ser Met Gly Gly Ile Val Leu Thr Ser Ala Ser
 1 5 10 15
 Gln Glu Lys

<210> 19
 <211> 19
 <212> PRT
 <213> *Streptomyces albus*

<400> 19
 Asp Ala Glu Gln Thr Thr Ala Ser Gly Leu Val Ile Pro Asp Thr Ala
 1 5 10 15
 Lys Glu Lys

<210> 20
 <211> 19
 <212> PRT
 <213> *Thermoactinomyces sp.*

<400> 20
 Glu Thr Glu Glu Lys Thr Ala Ser Gly Ile Val Leu Pro Asp Thr Ala
 1 5 10 15
 Lys Glu Lys

<210> 21
 <211> 19
 <212> PRT
 <213> *Bacillus subtilis*

<400> 21
 Glu Ser Glu Glu Lys Thr Ala Ser Gly Ile Val Leu Pro Asp Ser Ala
 1 5 10 15
 Lys Glu Lys

<210> 22
<211> 19
<212> PRT
<213> *Bacillus stearothermophilus*

<400> 22
Glu Thr Glu Glu Lys Thr Ala Ser Gly Ile Val Leu Pro Asp Thr Ala
1 5 10 15
Lys Glu Lys

<210> 23
<211> 19
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 23
Glu Ala Glu Thr Thr Thr Ala Ser Gly Leu Val Ile Pro Asp Thr Ala
1 5 10 15
Lys Glu Lys

<210> 24
<211> 19
<212> PRT
<213> *Bradyrhizobium japonicum*

<400> 24
Asp Ala Glu Glu Lys Thr Ala Gly Gly Ile Ile Ile Pro Asp Thr Ala
1 5 10 15
Lys Glu Lys

<210> 25
<211> 19
<212> PRT
<213> *Staphylococcus aureus*

<400> 25
Glu Gln Glu Gln Thr Thr Lys Ser Gly Ile Val Leu Thr Asp Ser Ala
1 5 10 15
Lys Glu Lys

<210> 26
<211> 19
<212> PRT
<213> *Mycobacterium bovis*

<400> 26
Glu Ala Glu Thr Thr Thr Ala Ser Gly Leu Val Ile Pro Asp Thr Ala
1 5 10 15
Lys Glu Lys

<210> 27
<211> 19
<212> PRT
<213> *Mycobacterium lepvae*

<400> 27
Glu Ala Glu Thr Met Thr Pro Ser Gly Leu Val Ile Pro Glu Asn Ala

1 5 10 15
 Lys Glu Lys

 <210> 28
 <211> 19
 <212> PRT
 <213> Clostridium perfringens

 <400> 28
 Glu Ala Glu Glu Thr Thr Lys Ser Gly Ile Ile Val Thr Gly Thr Ala
 1 5 10 15
 Lys Glu Arg

 <210> 29
 <211> 19
 <212> PRT
 <213> Synechococcus PCC7942

 <400> 29
 Glu Ala Glu Glu Lys Thr Ala Gly Gly Ile Ile Leu Pro Asp Asn Ala
 1 5 10 15
 Lys Glu Lys

 <210> 30
 <211> 19
 <212> PRT
 <213> Synechococcus PCC6301

 <400> 30
 Glu Ala Glu Glu Lys Thr Ala Gly Gly Ile Ile Leu Pro Asp Asn Ala
 1 5 10 15
 Lys Glu Lys

 <210> 31
 <211> 19
 <212> PRT
 <213> Synechocystis PCC6803

 <400> 31
 Pro Ala Glu Glu Lys Thr Ala Gly Gly Ile Leu Leu Pro Asp Asn Ala
 1 5 10 15
 Lys Glu Lys

 <210> 32
 <211> 19
 <212> PRT
 <213> Chlamydophila pneumoniae

 <400> 32
 Glu Glu Glu Ala Thr Ala Arg Gly Gly Ile Ile Leu Pro Asp Thr Ala
 1 5 10 15
 Lys Lys Lys

 <210> 33
 <211> 19
 <212> PRT

<213> Leptospiya interrogans

<400> 33

Gln Glu Ala Glu Glu Lys Ile Gly Ser Ile Phe Val Pro Asp Thr Ala
1 5 10 15
Lys Glu Lys

<210> 34

<211> 19

<212> PRT

<213> Chlamydophila psittaci

<400> 34

Glu Glu Asp Ser Thr Ala Arg Gly Gly Ile Ile Leu Pro Asp Thr Ala
1 5 10 15
Lys Lys Lys

<210> 35

<211> 19

<212> PRT

<213> Chlamydia trachomatis

<400> 35

Glu Glu Ala Ser Thr Ala Arg Gly Gly Ile Ile Leu Pro Asp Thr Ala
1 5 10 15
Lys Lys Lys

<210> 36

<211> 19

<212> PRT

<213> Rattus norregiens

<400> 36

Ala Ala Glu Thr Val Thr Lys Gly Gly Ile Met Leu Pro Glu Lys Ser
1 5 10 15
Gln Gly Lys

<210> 37

<211> 19

<212> PRT

<213> Bos taurus

<400> 37

Ala Ala Glu Thr Val Thr Lys Gly Gly Ile Met Leu Pro Glu Lys Ser
1 5 10 15
Gln Gly Lys

<210> 38

<211> 18

<212> PRT

<213> Orienta tsutsugamushi

<400> 38

Gln Asn Asp Glu Ala His Gly Lys Ile Leu Ile Pro Asp Thr Ala Lys
1 5 10 15
Glu Lys

<210> 39
<211> 19
<212> PRT
<213> Spirillospora sp.

<400> 39
Glu Val Glu Asn Lys Thr Ser Gly Gly Leu Leu Leu Ala Glu Ser Ser
1 5 10 15
Lys Glu Lys

<210> 40
<211> 18
<212> PRT
<213> Arabidopsis thaliana

<400> 40
Ile Gln Pro Ala Lys Thr Glu Ser Gly Ile Leu Leu Pro Glu Lys Ser
1 5 10 15
Ser Lys

<210> 41
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<220>
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gaagttgaaa ccaaactctgc tgggtggtatc gttctgaccg gttctgctgc tgcg 54

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<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

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aattcgagc agcagaaccg gtcagaacga taccaccagc agatttggtt tcaacttcca 60
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<210> 43
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<212> PRT
<213> Artificial Sequence

<220>
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<400> 43
Met Glu Val Glu Thr Lys Ser Ala Gly Gly Ile Val Leu Thr Gly Ser
1 5 10 15
Ala Ala Ala Asn
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<210> 44
<211> 61

<212> DNA
<213> Artificial Sequence

<220>
<223> linker

<400> 44
aattatggaa gttgaaacca aatctgctgg tggatcgtt ctgaccggtt ctgctgctgc 60
g 61